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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,753	02/04/2004	Robert Watz	DT-6710	3677
36377 7590 12/11/2007 DAVID TOREN, ESQ. ABELMAN FRAYNE & SCHWAB 666 THIRD AVENUE NEW YORK, NY 10017-5621			EXAMINER EASTMAN, AARON ROBERT	
			ART UNIT 4147	PAPER NUMBER
			MAIL DATE 12/11/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/771,753

**Applicant(s)**

WATZ, ROBERT

**Examiner**

Aaron R. Eastman

**Art Unit**

4147

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/309)  
Paper No(s)/Mail Date Feb. 4, 2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

On page 1, lines 35-37 it reads: "I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a)." This should read: "I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56."

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 4 discloses, "...a plurality of bores formed in the component and extending each in a respective tangential direction." This is not supported by the specification, particularly

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Figure 4a (see below), when the ordinary meaning of tangent is used as defined by the Merriam-Webster on-line dictionary ([www.m-w.com](http://www.m-w.com)) "meeting a curve or surface in a single point if a sufficiently small interval is considered".

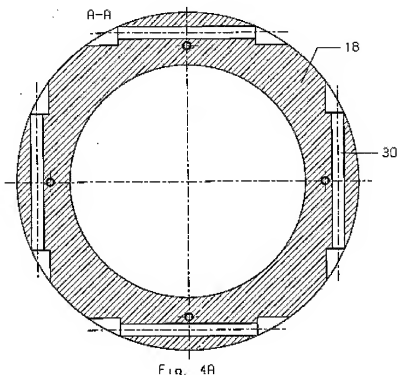


Figure 4a of Instant Application 10771753

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-315,794 (Ichikawa et al. hereinafter).

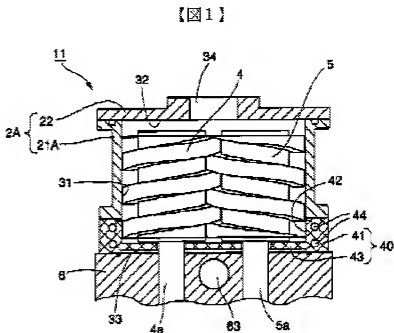


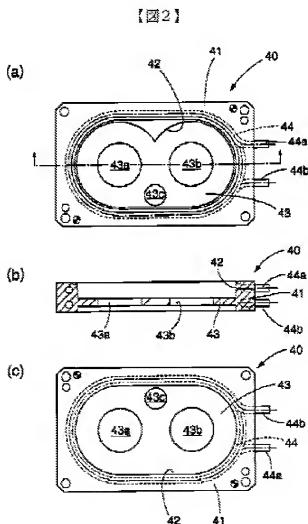
Figure 1 of Ichikawa et al.

5. In re claim 1, Ichikawa et al. discloses:

"A vacuum pump (11), comprising a flange (21a) provided on a suction side of the pump for connection with a connection flange of a recipient (22), and a tempering component (40)" but does not disclose "a tempering component to be arranged between the suction side flange of the pump and the recipient connection flange and including tempering means."

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6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to move the tempering component so that it is arranged between the suction side flange of the pump and the recipient connection flange in order to cool the air that passes through that area.



Figures 2a, 2b and 2c of Ichikawa et al.

7. In re claim 2, Ichikawa et al. discloses:

"A vacuum pump as set forth in claim 1, wherein the tempering means comprises a circumferential groove (41) provided on the component, and a hollow body (44) received in the groove."

8. Again, while Ichikawa et al. does not disclose a tempering component to be arranged between the suction side flange of the pump and the recipient connection flange, it would have been obvious to one having ordinary skill in the art at the time the invention was made to move the tempering component so that it is arranged between the suction side flange of the pump and the recipient connection flange in order to cool the air that passes through that area.

9. In re claim 4, Ichikawa et al. discloses:

"A vacuum pump as set forth in claim 1, wherein the tempering means comprises a plurality of bores (44, Fig. 1) formed in the component and extending each in a respective tangential direction" as tangent is best understood by the examiner.

10. Again, while Ichikawa et al. does not disclose a tempering component to be arranged between the suction side flange of the pump and the recipient connection flange, it would have been obvious to one having ordinary skill in the art at the time the invention was made to move the tempering component so that it is arranged between the suction side flange of the pump and the recipient connection flange in order to cool the air that passes through that area.

11. In re claim 5, Ichikawa et al. discloses:

"A vacuum pump as set forth in claim 1, wherein the tempering means includes means for flowing a tempering fluid therethrough." Paragraph 23 of Ichikawa et al. reads in part "...a pipe (44a, 44b), which has the purpose of circulating cooling water, is arranged in a doubly wound shape along said annular part (41)."

12. Again, while Ichikawa et al. does not disclose a tempering component to be arranged between the suction side flange of the pump and the recipient connection flange, it would have been obvious to one having ordinary skill in the art at the time the invention was made to move the tempering component so that it is arranged between the suction side flange of the pump and the recipient connection flange in order to cool the air that passes through that area.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. in view of US 1,136,957 (Hettinger hereinafter).

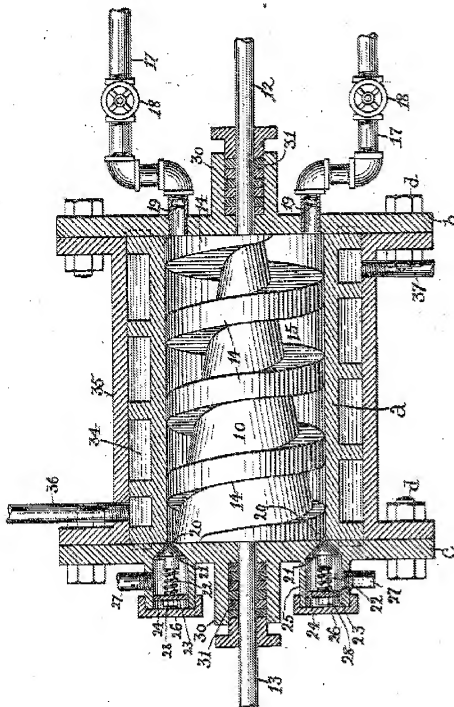
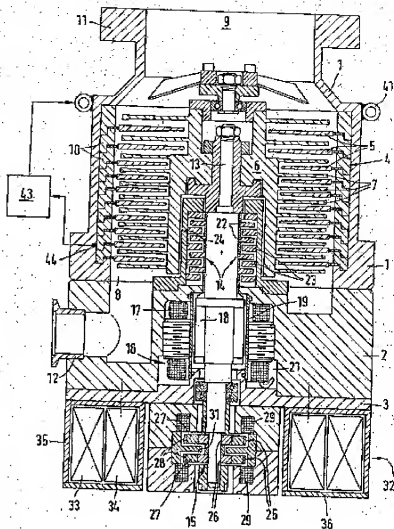


Figure 1 of Hettinger

14. In re claim 3, Ichikawa has been discussed above as disclosing "A vacuum pump as set forth in claim 1" but does not disclose "wherein the tempering means comprises a circumferential groove provided on the component, and a hollow body received in the groove" as set forth in the claim. Hettinger discloses: "... tempering means comprises a circumferential groove (34) provided on the component (a), and means for closing the groove comprising a sleeve (35) and sealing means (d)."

15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the cooling means taught in Hettinger with the vacuum pump taught in claim 1 as disclosed by Ichikawa et al. in order to effectively cool the pump.

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. in view of DE 42 37 972 C2 (Reimer hereinafter).



**Figure 1 of Reimer**

17. In re claim 6, Ichikawa has been discussed above as disclosing "A vacuum pump as set forth in claim 1" but does not disclose "further comprising temperature control means connected with the tempering means" as set forth in the claim. Reimer discloses: "...temperature control means (43) connected with the tempering means (41)."

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18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the temperature control means taught in Reimer with the vacuum pump taught in claim 1 as disclosed by Ichikawa et al. in order to regulate the temperature of the cooling fluid.

19. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. in view of US 1,288,728 (Spencer hereinafter).

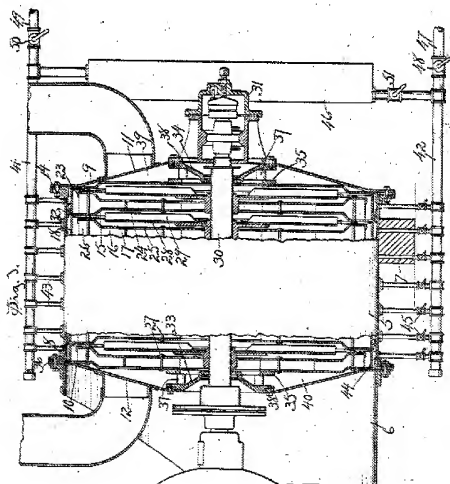


Figure 1 of Spencer (partial view)

20. In re claim 7, Ichikawa has been discussed above as disclosing "A vacuum pump as set forth in claim 1" but does not disclose, "a plurality of tempering components is provided between the suction side flange and the recipient connection flange" as set forth in the claim. Spencer discloses: "...a plurality of tempering components (comprising 42-51) is provided between the suction side flange and the recipient flange."

21. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the plurality of tempering components taught in Spencer with the vacuum pump taught in claim 1 as disclosed by Ichikawa et al. in order to maximize the cooling effect.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 1,601,531 (Jeannin) discloses a sealed circumferential groove. U.S. Patent No. 2,887,062 (Cametti et al.) discloses a coolant filled coil surrounding a pump motor. U.S. Patent No. 3,142,155 (Levesque et al.) discloses a plurality of cooling elements. U.S. Patent No. 4,073,338 (Fujikake et al.) discloses passing a fluid through circular heat exchangers. U.S. Patent No. 5,154,573 (Buse) discloses a circular cooling element for an impeller casing. U.S. Patent No. 6,478,534 (Bangert et al.) discloses a cooling ring.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron R. Eastman whose telephone number is 571-270-3132. The examiner can normally be reached on Mon-Fri 9:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on 571-272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aaron R. Eastman  
Examiner  
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/George Nguyen/

Supervisory Patent Examiner, Art Unit 4147